1852MNRAS..12..173M

Opposition of Mars, 1851–1852, *observed at the Cape of Good Hope.* By Mr. Maclear.

This memoir contains a numerous series of observations with the mural circle of *Mars*, and the stars in the *Ephemeris of the Stars proper to be observed with Mars near the opposition of the planet in* 1852.* The refraction is computed and applied, and there are 46 days between December 22, 1851, and February 28, 1852, on which observations have been made.

Mars in Opposition in 1852. By Mr. Warren De la Rue.†

"Since October 17, 1851, when I made the drawing of *Mars*, which at a former meeting I presented to the Society, I have repeatedly examined the planet with my thirteen-inch Newtonian, and on most occasions have been struck with the distinctness of the white spot surrounding the north pole; but I never saw the details on its surface so vividly defined as on January 4, xiv^{h}, and January 25, xii^{h}, when I made the drawings which I have now the honour of presenting to the Society, and which I believe to be as faithful delineations of the aspect of *Mars* at these epochs, as my pencil, unaided by micrometrical measurements, could produce.

"On reference to the drawings, it will be remarked that the northern white spot extended to about the same parallel of latitude at both periods (39° from the limb), and that its outline was indented and irregular; and it will be also perceived that the south polar regions, though paler in colour than the general ruddy tint of the planet, were not white.

"On the 4th of January there existed, a little to the east of the planet's centre, a dark stripe which, running north and south, divided the disc into two unequal halves; but before reaching the poles it spread eastward and westward, forming two broad irregular zones, the southern zone being the darker of the two, and the northern becoming paler as it approached the white spot.

"At the time of observation on the 25th, 20 days 22 hours had elapsed since that on the 4th, the planet had therefore completed twenty rotations and $\frac{140}{360}$ths, so that the central dark streak, visible on the 4th, by moving through 140° had become invisible; whilst the eastern limb of the 4th had nearly reached the western limb of the planet's disc visible on the 25th. Referring to the drawing for the latter date, there will be perceived in the south-west quadrant, three distinct irregular dark markings surrounded by whitish boundary-lines to which I would wish to direct particular attention, as many similar white streaks, as well as minute dark spots, were visible on the surface of the planet; but they flitted in and out of view with such tantalising rapidity, that it was impossible for me

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* *Nautical Almanac*, 1852, p. 565 et *seq.*

† Along with this notice Mr. De la Rue presented two very beautiful drawings of *Mars*, which may be seen at the apartments.

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to record them. In the north-west quadrant there existed a broad irregular marking running north and south, and spreading westward along the boundary of the northern white spots."

"The night of the 25th was even finer than that of the 4th, and the telescope and atmosphere being both in good condition the image of the planet was scarcely impaired by any false light, but presented during the hour occupied in making the sketch, a continuous impression of hard and distinct markings, which appeared to be inconsistent with the supposition that the configuration could be due to a clouded atmosphere."

On the Parallax of β Centauri. By Mr. Maclear.

The observations on which this investigation is founded were made between July 29, 1842, and October 28, 1844, under the same circumstances, and nearly at the same time, with a portion of the observations of *α Centauri*, published in Vol. xx. of our *Memoirs.* The result is not to be deemed conclusive, but it has sufficient weight to make it of considerable positive value. A new series of observations has been commenced since, with the systematic circumspection demanded by such researches, but which was not previously practicable.

The mode of observation, computation, &c. is the same as that described in the *Memoirs*, vol. xx.

It does not appear that *β Centauri* has any *decided* proper motion. The mean N.P.D. for Jan. 1, 1843, is 149° 36′ 41″·6.

By 137 observations of *β Centauri*, Mr. Maclear finds,—

Parallax *β Centauri* = 0″·47 Probable Error 0″·044
Constant of Aberration = 20·59 — — 0·049

Errata in Mr. Maclear's Memoirs, Vol. XX. Roy. Ast. Soc. Mem.

Vol. xx. page 52, column B.A.C. *for* 4339, *read* 4399.
— — — 54, line 13 from top, R.A. of Rümker, *for* $14^{h}\ 36^{m}\ 34\cdot5$, *read* $14^{h}\ 36^{m}\ 44^{s}\cdot5$.
— — — 55, line 16 from top, *for* $15^{h}\ 0^{m}\ 5^{s}\cdot9$, *read* $15^{h}\ 0^{m}\ 5^{s}\cdot59$.
— — — 25, Oct. 21, *for* reduction 22″·84, *read* 23″·84.
— — — — — — *for* 127° 30′ 15″·60, *read* 127° 30′ 14″·60.

Extracts of a Letter from Lieut. Gilliss, U.S.N.

"*Santiago de Chile.*

"The weather continues to favour us in one sense, having enabled me to obtain above 800 differential measures between *Mars* and stars in the ephemeris sent you, besides meridian observations of the *N. A.* ephemeris also. . . . Brorsen's comet will be looked after as soon as it comes within striking distance of our

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